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## MPLHR: Energy Monitor Field Calibration

### I. Purpose:

The purpose of this procedure is to provide the necessary steps to RESET for field calibration of the internal laser energy monitor for the MPLHR.

### II. Cautions and Hazards:

- The laser exiting the transceiver telescope of the MPLHR is classified as a Class 1 Eye-Safe laser. Although not actually harmful, some discomfort may be experienced from direct eye exposure. It is good practice to limit direct eye exposure to laser radiation. When working with the MPLHR, avoid looking directly down the beam into the telescope, especially after focusing through the Fresnel lens.

### III. Requirements:

Fresnel lens and mount.

### IV. Procedure:

#### A. Steps:

1. Mount Fresnel lens (83% Transmissivity) on Telescope Energy Monitor 3209.
2. Darken room.
3. Put Energy Monitor near focus of Fresnel lens (should be broad enough to cover most of area of sensor).
4. Record mJoules/sec or mWatts (if significantly less than 10 (5-7), contact mentor.

NOTE: to zero, switch to manual mode, emission OFF; set power Max to 30 m. Zero with Zero knob.

5. Click red **END** to stop MPL; click on **CLOSE**.
6. Copy Energy.1 from diskette to c:\WMPL\.
7. Rename Energy.MAP Energy.OLD.yymmdd.MAP.
8. Copy Energy.1 to make spare copy in same directory.

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9. Rename Energy.1 Energy.MAP.
10. Run WMLP.exe (double click).
11. Open Energy.MAP in WordPad (ALT ESC to explorer).
12. Rezero Power-max, turn laser on (press emission again), fill out table with readings from Power- max. Convert power Mj to mjoules/pulse by dividing by 2.5. Edit energy.map adding new values for calibrated energies. (Energies must be put in file from least to greatest.)
13. Close MPL.

#### **V. References:**

None.

#### **IV. Attachments:**

None.